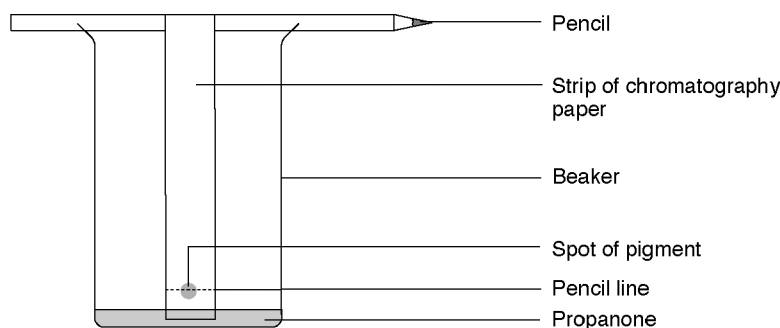


IGCSE chemistry section 1b paper chromatography

Chromatography of leaves

Introduction

Most leaves are green due to chlorophyll. This substance is important in photosynthesis (the process by which plants make their food). In this experiment, the different pigments present in a leaf are separated using paper chromatography.



What to record

The chromatogram produced in this experiment can be dried and kept.

What to do

1. Finely cut up some leaves and fill a mortar to about 2 cm depth.
2. Add a pinch of sand and six drops of propanone from the teat pipette.
3. Grind the mixture for at least three minutes.
4. On a strip of chromatography paper, draw a pencil line 3 cm from the bottom.
5. Use a fine glass tube to put liquid from the leaf extract onto the centre of the line. Keep the spot as small as possible.
6. Allow the spot to dry, then add another spot on top. Add five more drops of solution, letting each one dry before putting on the next. The idea is to build up a very concentrated small spot on the paper.
7. Put a small amount of propanone in a beaker and hang the paper so it dips in the propanone. Ensure the propanone level is below the spot.
8. Leave until the propanone has soaked near to the top.
9. Mark how high the propanone gets on the paper with a pencil and let the chromatogram dry.

Safety

Propanone is highly flammable. Wear eye protection.

Questions

1. How many substances are on the chromatogram?
2. What colours are they?
3. Which colour moved furthest?